THE GARDEN CALENDAR.

A radio talk by W. R. Beattie, horticulturist, Bureau of Plant Industry, delivered through WRC and 37 other radio stations associated with the National Broadcasting Company, Tuesday, September 16, 1930.

How-do-you-do friends: It is an old saying that "You never miss the water 'till the well runs dry." The truth of this adage has been fully borne out in many sections of this country during the drought period of the present summer, nor is the end yet in sight for many sources of water, especially shallow wells will continue to show the effects of the drought for months to come.

The early settlers always located their homes with reference to some source of water supply. In many cases it was a spring, in some localities shallow wells, and in parts of the country tube and artesian wells. All of the water for household purposes had to be carried, therefore, the home was usually located as near the water supply as possible.

The problem of securing an adequate supply of pure water for the use of cities has been and is becoming even more serious. This problem, however, is not confined to the cities but applies to many farms, and especially small towns where a central water supply has not yet been developed.

The present situation on farms calls for a careful study with a view to providing a more dependable supply of water for household and farm purposes. During the past 60 days thousands of springs and shallow wells that were considered inexhaustible have become completely dry and many of those that still contain water have become brackish and unfit for use. The remedy for the present situation in many sections of the country lies in seeking a deeper source of water. I know of specific cases where shallow wells of 30 to 60 feet in depth have gone dry and where drillings to a depth of 100 feet or more have given an abundant supply of good water.

At varying depths and under the greater part of the country there lies an inexhaustible supply of practically pure water. In some cases this water contains a tinge of sulphur and other minerals, but under most of the country what might be termed pure water is present. Small towns within the drought area have suffered fully as much from water shortage as have farms, and while the drilling of deep wells is fairly expensive, the cost per family will be very moderate when apportioned among 25 or more families. I happen to live in a community which for several years depended upon a single well for its water supply. At that time there were 15 families in the group and the cost for water averaged $1.00 per month per family. This covered the up-keep of the pumping outfit and the charges for electric current.

Many farms are now supplied with electricity which simplifies the problem of water pumping. Electric driven pumps are now equipped with automatic devices which turn the electric current on and off as required to maintain

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a constant supply of water under pressure which will deliver it to all parts of the home and to the barn or dairy house. Where electricity is not available small gasoline engines are dependable as a source of power. Windmills may still be depended upon for pumping water in most sections of the west.

The lesson that we are to draw from the present situation is that we should in many cases provide a more dependable source of water supply than we now have. No doubt some of you are saying -- "Oh well! such a drought occurs only once in a lifetime and it will be a long time before we have another" -- perhaps so, but I'll lay a bet right now that when it does come, it will catch some of us napping.

In my own case, I lost heavily of my plantings of small fruits, shrubbery and ornamental plants, all of which could have been saved by the addition of a small quantity of water. I believe that there were hundreds of people like myself, who could have provided water for their gardens at little expense had they gone about it in time and in the right manner. I was on a place within the past few days where two 30-foot open wells which in the past furnished plenty of water for household and other uses, have gradually failed until at present they are practically dry. The owner foreseeing what was coming hired a well driller and sunk a 6-inch casing to the rock at a depth of something over 100 feet, where an adequate supply of water was obtained. The new well is now fitted with a one-half horsepower automatic electric pump, which complete with pump, piping, well and all has cost less than $500, and has solved the water problem for that farm for years to come.

I have a suggestion for any of you whose homes and other buildings are located near those of your neighbors. A deep well that will yield say 10 or 12 gallons of water per minute will supply at least a half dozen families. The problem is to distribute the water from the well to the homes comprising the group. A one-inch pipe is large enough to carry a family supply of water a distance of 200 yards, an inch and a quarter pipe will prove large enough to carry the supply up to 300 or 350 yards, an inch and a half pipe will carry the supply a distance as great as 500 yards or 1500 feet. These distances are based on comparatively level ground and with a pressure of approximately 55 pounds at the pump. If the point to which the water is to be carried is higher than the well, additional pressure will be required at the pump, but if the point of consumption is lower than the pump less pressure will be required or the water can be carried to a greater distance. One inch galvanized pipe will as a rule cost not exceeding 10 cents a foot when bought in quantities, so it would prove economical to carry the water a distance of 1000 feet or more under most circumstances. When the distance is 2000 feet or more, it would pay to put in another well, but I believe that there are many cases where whole neighborhoods or groups of farm families could be served from one deep well, especially where electric current is available.

Many fruit growers have saved their trees in the drought area by hauling water. This is expensive but pays. Water is essential to every orchard enterprise for spraying, and more recently for the washing of fruit, and I believe that it will pay orchardists to consider carefully this matter of an adequate water supply with the possibility of piping water through the orchards for use in case of extreme drought.

The vegetable growers in the drought area who had their land equipped with some form of irrigation have been able to grow good crops, but my thought in presenting this matter today was to call your attention to the desirability of providing a dependable water supply, especially for use around the home. It is a great satisfaction when shrubbery and lawns are dying to be able to turn on the water and keep things in a growing condition until natural relief comes.

The method of providing the water supply as I have already said, varies with locality and in many cases, it is a matter of going deeper into the earth in search of an adequate supply of pure water. Those of you who live in the irrigated sections have the advantage that you anticipate the need for irrigation every year so are not disappointed if it does not rain, but those of us who live in the region of natural rainfall are seldom prepared for such dry periods as we have experienced this year.
